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SQUIRE, SANDERS & DEMPSEY L.L.P.			LY, NGHI H	
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TYSONS CORNER, VA 22182			2686	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/592,156

Applicant(s)

FRIMAN ET AL.

Examiner

Nghi H. Ly

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Lu et al (US 5,887,256).

Regarding claim 1, Lu teaches a method of allocating a channel in a mobile System (see Abstract, fig.2 and column 13, lines 9-40, see "resource allocation"), comprising: arranging in the system unallocated telecommunication channels (see fig.2, channels 174) between a base station controller and a base station (see fig.2 and column 15, lines 27-32, Lu's "free channel" reads on Applicant's "unallocated communication channel". In addition, see Applicant's specification page 3, lines 1-11 for "unallocated telecommunication channel"), allocating in call set-up at least one of said telecommunication channels to the base station handling the call (column 15, lines 4-15, see "setup" and see column 15, lines 27-32), and controlling the base station controller to transmit information to the base station on the telecommunication channel allocated thereto (column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel

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activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel". In this case, the "selected channel" is "the free channels" and it reads on Applicant's "unallocated communication channel", see column 15, lines 27-28).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Tiedemann et al (US 5,987,326) and further in view of Choi et al (US 6,724,740).

Regarding claim 2, Lu teaches a method as claimed in claim 1 characterized in that the telecommunication channels are circuit-switched (see column 2, lines 33-53 and column 3, lines 9-15).

Lu does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto.

Tiedemann teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto (see column 8, lines 46-54 and see column 8, line 54 to column 9, line 4).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Tiedemann into the system of Lu in order to reduce congestion.

The combination of Lu and Tiedemann does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at

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least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up.

Choi teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up (see Abstract, column 29, lines 4-24, see "call setup", "fundamental channel" and "supplemental channel").

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of into the system of Lu and Tiedemann in order to provide a voice and data transmission/reception device in a communication system and a control information message by using channel that are not occupied.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Tiedemann et al (US 5,987,326) and further in view of Farias et al (US 4,891,806).

Regarding claim 3, the combination of Lu and Tiedemann teaches a method as claimed in claim 2. The combination of Lu and Tiedemann does not specifically disclose the free telecommunication channels are classified into categories on the basis of their data transmission capacity or quality such that the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels.

Farias teaches the free telecommunication channels are classified into categories on the basis of their data transmission capacity or quality such that the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels (see column 16, lines 36-42).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Farias into the system of Lu and Tiedemann in order to maintain signal quality.

7. Claims 4, 7, 8, 9, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566).

Regarding claim 4, Lu teaches a mobile system (see fig.2), which comprises a base station controller (see fig.2, BSC 172) and at least a first and a second base station (fig.2, BTS 164, see three "." Under box BTS and it reads on Applicant's "first and a second base station"), which comprise transceiver units (see fig.2, TRX 160 and column 7, lines 32-33) for establishing a telecommunication connection by radio signals to the subscriber terminals located in the base station coverage area (see fig 2, wireless connection between BTS and handsets 150) and the base station controller (see fig.2, BSC 172) comprises control means (see fig.2, Processor 184 of BSC 172) which in call set-up (column 15, lines 4-15, see "setup" and see column 15, lines 27-32) allocate at least one of the telecommunication channels to the first or the second base station for the duration of the call (column 8, lines 19-50, see "BSC unit 172 further includes a

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processor 184 for handling the aforementioned radio resource control RR, and column 16, lines 15-17, see "the BSC sends a Channel Release message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel").

Lu does not specifically disclose switching means for switching the base station transceiver units onto a particular channel of a plurality of optional telecommunication channels between the base station controller and the base stations, wherein the base station controller comprises control means which in call set-up allocate at least one of the telecommunication channels to the first or the second base station for the duration of the call and which transmit a predetermined message indicating the allocated telecommunication channel to the base station to whom the channel is allocated and the switching means of the first, and correspondingly, of the second base station are responsive to the message for switching the base station transceiver units to the telecommunication channel assigned by the message.

Kanai teaches switching means for switching the base station transceiver units onto a particular channel of a plurality of optional telecommunication channels between the base station controller and the base stations (see fig.1, BSC 102, Controller 130 and Switching devices 105), wherein the base station controller (see fig.1, BSC 102) comprises control (see fig.1, Controller 130, since the Controller 130 receives signal from the BSC 102, those skilled in the art thus would appreciate that Kanai could be modified such that the station controller (see fig.1, BSC 102) comprises control (see fig.1, Controller 130)) without deviating from the scope and spirit of Kanai's invention)

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means which allocate at least one of the telecommunication channels to the first or the second base station for the duration of the call (column 4, lines 24-27, see "the signal in multiplexer 106-2 will, depending on the setting of switching device 105" and which transmit a predetermined message (column 5, lines 26-40, see "the controller 130 uses the information from the traffic monitor 250, and controls the switching") indicating the allocated telecommunication channel to the base station to whom the channel is allocated (column 3, lines 48-55, see "Based on information which flows from the customer data registers 211, 221, 231 and column 5, lines 26-40, see "Depending upon the traffic situation inside each cell and information on the type of service contact"), and the switching means of the first, and correspondingly, of the second base station (Abstract, and column 1, line 64 to column 2, line 8, see "first base station" and "second base station") are responsive to the message for switching the base station transceiver units to the telecommunication channel assigned by the message (column 5, lines 26-40, see "the controller 130 uses the information from the traffic monitor 250, and controls the switching". Since Kania teaches "first base station" and "second base station" (see Abstract, and column 1, line 64 to column 2, line 8), the teaching of Kanai inherently teaches that if the transceiver 104 (of first base station and/or second base station) is selected (or not selected), the base station of that transceiver 104 would also be selected (or not selected) respectively, and it reads on Applicant's claimed limitation).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Kanai into the system

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of Lu so that traffic can be assigned to the transceiver, based on the provider with the highest volume or according to a prearranged priority scale (see Kanai, Abstract).

Regarding claim 7, Lu further teaches the message indicating the allocated telecommunication channel also indicates a radio channel to be used in the call to the transceiver unit of the base station (column 16, lines 15-17, see “the BSC sends a Channel Release message to the BTS to release the channel” and column 15, lines 29-32, see “a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel”).

Regarding claim 8, Lu further teaches the mobile system is the GSM system and said message consists of a CHANNEL ACTIVATION message (column 16, lines 15-17, see “the BSC sends a Channel Release message to the BTS to release the channel” and column 15, lines 29-32, see “a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel”) in accordance with the GSM specifications part 08.58 (see column 7, lines 18- 30, see “BSM 08.58”), to which is added information on the telecommunication channel allocated to the base station (also see column 16, lines 15-17, and column 15, lines 29-32).

Regarding claim 9, claim 9 is rejected with the similar reason as set forth in claim 4 above.

Regarding claim 10, Lu further teaches the particular transceiver unit comprises means for message for the duration of the call to be applying a radio channel assigned by the established (column 16, lines 15-17, see “the BSC sends a Channel Release

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message to the BTS to release the channel" and column 15, lines 29-32, see "a channel activate message is sent from the BSC to the BTS which essentially asks the BTS to activate the selected channel").

Regarding claim 11, claim 11 is rejected with the similar reason as set forth in claim 4 above.

8. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566) and further in view of Tiedemann et al (US 5,987,326) and Choi et al (US 6,724,740).

Regarding claim 5, the combination of Lu and Kanai teaches a method as claimed in claim 4 characterized in that the telecommunication channels are circuit-switched (see Lu, column 2, lines 33-53 and column 3, lines 9-15).

The combination of Lu and Kanai does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a free secondary telecommunication channel is allocated thereto.

Tiedemann teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and a primary telecommunication channel, if available, is allocated to the base station, otherwise a

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free secondary telecommunication channel is allocated thereto (see column 8, lines 46-54 and see column 8, line 54 to column 9, line 4).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Tiedemann into the system of Lu and Kanai in order to reduce congestion.

The combination of Lu, Kanai and Tiedemann does not specifically disclose the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up.

Choi teaches the telecommunication channels are classified on the basis of their characteristics into at least two categories, i.e. primary telecommunication channels and secondary telecommunication channels, and in call set-up (see Abstract, column 29, lines 4-24, see "call setup", "fundamental channel" and "supplemental channel").

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of into the system of Lu, Kanai and Tiedemann in order to provide a voice and data transmission/reception device in a communication system and a control information message by using channel that are not occupied.

9. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lu et al (US 5,887,256) in view of Kanai (US 6,195,566) in view of Farias et al (US 4,891,806).

Regarding claim 6, the combination of Lu and Kanai teaches a mobile system as claimed in claim 4. The combination of Lu and Kanai does not specifically disclose the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels.

Farias teaches the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels (see column 16, lines 36-42).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of the invention was made to provide the above teaching of Farias into the system of Lu and Kanai in order to maintain signal quality.

Response to Arguments

10. Applicant's arguments with respect to claims 1-11 have been considered but are moot in view of the new ground(s) of rejection.

On page 16 of applicant's remarks, applicant argues that Farias fails to teach the primary telecommunication channels have larger data transmission capacity or they are of better quality than the secondary telecommunication channels.

In response, claim 6 recites "or" and it means one in two. Therefore, the examiner selects only one in two, and Farias does indeed teach "they are of better quality than the secondary telecommunication channels" (see column 16, lines 36-42).

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Conclusion

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

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05/05/05

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